

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A laser that controls amplified spontaneous emission and/or parasitic light, comprising:

a laser gain medium having polished surfaces that are used to transport pump light by internal reflection throughout said laser gain medium,

a light source directing laser pump light into said laser gain medium,

a layered coating on at least some of said polished surfaces that are used to transport pump light by internal reflection of said laser gain medium,

said layered coating having comprising a reflective inner material coating layer and an absorptive or and scattering outside material coating layer and

configured to substantially reflect the pump light that strikes the layered coating so as to direct the pump light back into said laser gain medium, and

substantially transmit said amplified spontaneous emission and/or parasitic light that strikes the layered coating so as to let this light strike said outside material coating layer of said layered coating where it is either scattered or and absorbed.

2. (Currently Amended) The laser of claim 1, wherein said absorptive or and scattering outside material is coating layer includes a diffuse reflectance material such as examples of which include powdered BaSO₄, an absorbing film such as Ge, or a roughened surface to reduce the specular reflectivity.

3. (Currently Amended) The laser of claim 1, wherein said absorptive or and scattering outside material is includes powdered BaSO₄.

4. (Currently Amended) The laser of claim 1, wherein said absorptive or and scattering outside material is coating layer includes a powdered an absorbing film such as an example of which includes Ge.

5. (Currently Amended) The laser of claim 1, wherein said absorptive or and scattering outside material is coating layer includes a roughened surface.

6. (Currently Amended) An end pumped laser, comprising:

a laser light source,

a laser gain element, said laser gain element having enter or exit surfaces through which the laser light is intended to enter or exit the gain element and smooth surfaces other than those enter or exit surfaces through which the laser light is intended to enter or exit the gain element, and

~~an a layered optical coating applied to said smooth surfaces wherein said smooth surfaces serve to substantially reflect pump light that is introduced into said laser gain element and so keep the pump light confined within said laser gain element,~~

~~said applied layered optical coating including an outside material coating layer, wherein said layered optical coating designed to will preferentially transmit amplified spontaneous emission and parasitic light out of said laser gain element and into said optical outside material coating layer, said applied optical coating having an outer surface and~~

~~said outer surface of said optical outside material coating layer designed to substantially will scatter or and absorb amplified spontaneous emission and parasitic light that reaches said outer surface outside material coating layer so as to prevent it from re-entering said laser gain element.~~

7. (Currently Amended) A method of producing a laser gain element for amplifying laser light, comprising:

providing said laser gain element with enter or exit surfaces through which the laser light is intended to enter or exit the gain element,

providing said laser gain element with smooth surfaces other than those enter or exit surfaces through which the laser light is intended to enter or exit the gain element,

coating said smooth surfaces with an optical coating so that said smooth surfaces which are in contact with said applied optical coating serve to substantially reflect

pump light that is introduced into the gain element and so keep pump light confined within the gain element and

wherein said applied optical coating ~~is designed~~ includes an outside material coating layer and wherein said optical coating will to preferentially transmit amplified spontaneous emission and parasitic light out of the gain element and into said ~~applied outside material~~ coating layer and the outer surface of said applied optical ~~outside material~~ coating layer substantially scatters ~~or and~~ absorbs said amplified spontaneous emission and parasitic light that reaches said ~~outer surface of~~ said applied optical ~~outside material~~ coating layer so as to prevent said amplified spontaneous emission and parasitic light from re-entering the laser gain medium.

8. (Currently Amended) The laser method of claim 7, wherein said applied optical coating is a diffuse reflectance material ~~such as examples of which include~~ powdered BaSO₄, an absorbing film ~~such as an example of which includes~~ Ge, or a roughened surface to reduce the specular reflectivity.